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LAND TECHNOLOGY SOLUTIONS (LTS) PROJECT

Leveraging Land Technologies and Participatory
Approaches for Community Forestry in Liberia

ASSESSMENT REPORT

February 2018

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ACRONYMS AND ABBREVIATIONS

CFMA	Community Forest Management Agreement
CFMB	Community Forest Management Body
CFWG	Community Forest Working Group
CRL	Community Rights Law of 2009
FDA	Forestry Development Authority
FIFES	Forest Incomes for Environmental Sustainability
LA	Land Authority
LC	Land Commission
LGSA	Land Governance Support Activity
LLAP	Liberia Land Administration Project
LRCFP	Land Rights and Community Forestry Program
LTS	Land Technology Solutions
MAST	Mobile Applications to Secure Tenure
NFRL	National Forestry Reform Law of 1996
NGO	Non-Governmental Organization
NTFP	Non-timber Forest Product
PROSPER	People, Rules and Organizations Supporting the Protection of Ecosystem Resources
SDI	Sustainable Development Institute

I.0 INTRODUCTION

This report outlines an assessment that was conducted to introduce, demonstrate and assess the needs for Mobile Applications to Secure Tenure (MAST) and its complimentary participatory approach for supporting USAID/Liberia's community forestry activities. MAST is a suite of innovative technology tools and inclusive methods that use mobile technologies to efficiently, transparently, and affordably map and document land and resource rights. The assessment found that MAST may present a cost-effective opportunity for Forest Incomes for Environmental Sustainability (FIFES), the Forest Development Authority (FDA) and Land Authority (LA), and subsequent Community Forests, to work together to capture land information to promote transparency in forest governance in Liberia. This would promote better and more sustainable uses of land and resources and help increase economic benefits to the communities.

This report provides a background on the land administration and forestry management frameworks in Liberia (Section 2), then provides an overview of the findings from the Assessment Trip (Section 3). Based on this assessment, largely conducted during the two-week assessment trip (January 29-February 10, 2018), LTS describes a conceptual approach that may be appropriate for moving forward (Section 4), as well as immediate next steps (Section 5).

I.1 LAND TECHNOLOGY SOLUTIONS (LTS) PROJECT

USAID's E3/Land and Urban Office has launched a new project, Land Technology Solutions (LTS), designed to refine USAID's Mobile Applications to Secure Tenure (MAST) and support its expansion into new countries. LTS is an integrated knowledge transfer, capacity building, and technical assistance project that helps eligible countries rapidly deploy a customized version of MAST either as a stand-alone pilot project or an integrated activity supporting an existing program. LTS offers a suite of services that include:

- Technology development in supporting the creation of a country-specific, customized version of MAST adapted to local needs;
- Training and capacity building at the national, regional and local levels; and
- Ongoing technical assistance and evidence-based monitoring and evaluation support for sustainment and/or future scaling by host countries.

I.2 WHAT IS MAST?

MAST is a suite of innovative technology tools and inclusive methods that use mobile phones and tablets to efficiently, transparently, and affordably map and document land and resource rights. MAST helps people and communities define, record, and register local land boundaries and important information, such as uses, how the land is occupied, as well as the names and photos of people who live there. MAST combines an easy-to-use mobile phone application with training and a participatory approach that empowers citizens in the process of understanding, mapping, and registering their own rights and resources.

MAST has been used by stakeholders to solve a myriad of challenges that impede tenure security by making the technology more accessible to more people. MAST provides transparent and effective mechanisms that improve land governance, build institutional capacities, engage citizens and help them understand their rights, responsibilities in either formal or informal tenure systems or in areas where

these two systems operate simultaneously. MAST is an important global tool that can be customized to meet the requirements of varied local contexts. Since 2014, MAST has been implemented in Tanzania, Burkina Faso, and Zambia.

1.3 SCOPE OF ASSESSMENT MISSION

The goal of this activity was to introduce, demonstrate and assess the need for MAST and its participatory approach for supporting USAID/Liberia's community forestry activities. LTS worked closely with USAID FIFES to identify ways LTS could support project activities, especially focused on helping to consolidate information for improved forest governance and the promotion of forest and commodity value chains. LTS coordinated its initial two-week assessment trip (January 29-February 10, 2018), with the USAID/Liberia Mission and FIFES to rapidly assess the feasibility for using MAST to improve community forest governance. Key assessment activities included:

1. Stakeholder Outreach and Interviews – LTS entered into open discussions with implementing partners and stakeholders to introduce them to MAST and to determine the feasibility of customization for community forestry governance.
2. Community Forest Visits – LTS conducted a series of field visits to Community Forests to better understand context, opportunities, constraints and logistics involved with implementing MAST in Liberia.
3. In-field Demonstrations – LTS provided FIFES and Community Forest Management Body (CFMB) with in-field demonstrations of the MAST technology.
4. Workshop with Community Forest Working Group (CFWG) – Provided a presentation and demonstration of MAST to CFWG and engaged in a strategic planning exercise to identify areas where MAST could support community forest governance.
5. Assessment Report - Developed this assessment report, that provides a high-level outline on how to adapt MAST into community forestry governance in Liberia.

The second phase of the assessment, tentatively scheduled for early May 2018, will focus on delivering to FIFES an initial customized version of MAST to FIFES that can be used to support the documentation of FIFES enterprise farms and assist in engaging the communities in the management of forest resources. In addition to the delivery of an initial version of MAST, LTS will work with FIFES to develop an implementation plan for adapting the MAST technology as part of its program to help better reach project objectives. The implementation approach will take into consideration options for MAST sustainability in Liberia.

2.0 BACKGROUND AND CONTEXT

2.1 LAND RIGHTS AND CUSTOMARY TENURE

The laws governing land ownership in Liberia are in a state of flux, given the drafting and tabling of a new Land Rights Act that was developed as a result of a national land policy process. The Land Rights Policy put the vast majority of Liberians on a path towards having customary land ownership rights. It defined Public Land, Government Land, Customary Land and Private Land as well as Protected Areas that are to be conserved for the benefit of all Liberians (USAID 2013). In 2015, the Land Rights Act was put before the National Legislature and the Government. It, however, was not passed, and the status of the bill is currently undetermined.

In the absence of an established Land Rights Act, the legal framework for land and resource rights remains uncertain. Problems are caused by a duality between state laws and customary laws/systems. There is also ambiguity in statutory laws regarding customary land rights. For example, uncertainty results from lack of clarity between the Revised Laws and Regulations of the Hinterland 1949 (Hinterlands Law) or the Aborigines Law (1956), and what law presides. Each law recognizes customary land tenure systems but there is a significant difference between them regarding the “rights of ownership” versus “rights of usage.” The Hinterland Law (1949) recognizes the right to title and ownership to tribal lands and provides absolute ownership rights to indigenous Liberians. The Aborigines Law (1956), however, gives rural communities rights of use and possession rather than ownership. Although it seems likely that the Aborigine Law repealed the Hinterland Law, this debate still causes confusion, even among members of Liberia’s judiciary Wily (2007).

Customary systems still prevail in much of Liberia. Up until 1956, local communities were able to formalize their customary rights –collective territorial ownership – under the Aborigines Land Grants (Wily, 2007). The Aborigines Laws, however, prompted a fundamental change in customary rights, as did the Public Land Act of 1956, reenacted in 1973, which purported that all land was owned by the state. This set-in motion a gradual shift in customary land rights - from the rights of collective land ownership to recognition of only user or ‘usufruct’ rights of possession. Under the Public Land Law, all lands held under customary tenure (and not formerly titled) are to be considered “public land” and owned by the state. The impact of this law on rural inhabitants of the country cannot be underestimated.

Wily (2007) indicates that this was a big change, and that in practical terms, the Public Land Act provides the state exhaustive rights of ownership to land held under customary law and tenure systems. While the Act provides mechanisms for secure rights through a Public Land Sale, this process, the Land Commission explained is “a source of weak land governance, corruption, political patronage, and discriminatory treatment” (Hughes, 2013). More importantly, the Public Land Act provides the state with a legal framework to grant foreign individuals and corporations use of land for agricultural, mercantile and mining operations.

This has caused problems, writes the Sustainable Development Institute (SDI), as the modern legal status of land in rural communities now appears to be that of landless tenants of the state, despite land being held on a customary basis by communities for centuries (2017). The World Bank, in a report on land insecurity, summarizes the problem in the current legal and customary law and points out that “...dualism [is] structured in law so that the state system is always expanding at the expense of the customary system, with areas of land under customary law being granted or sold by the state into fee simple ownership” (2008).

The duality of these systems continues to cause conflicts as the state allocates lands to concessions for exploiting natural resources such as timber, minerals, or agriculture without regard to traditional or

customary land holdings or communities. Decision making processes are not transparent, usually done without any consultation with local communities and adds to uncertainties regarding local community land and resource holdings and governance. This system has resulted in overlapping land and resource allocations, and as a result, in a situation where most Liberians, especially those who reside in rural areas, continue to live without clarity of their community land holdings or without secure land rights.

2.2 FOREST LAW AND COMMUNAL FOREST RIGHTS

Emerging from civil war and a series of United Nations Security Council sanctions that focused on preventing timber product revenues from being used to purchase weapons, Liberia has worked to reform its legal system regarding its forest sector. Legal reforms, namely the National Forest Reform Law (NFRL) of 2006; and the Community Rights Law (CRL) with Respect to Forest Lands of 2009, have provided a framework for the conservation and management of forest areas. The Government's Forest Strategy was built on these two legal reforms and was purported to focus on using the forest to produce a complete range of goods and services, contribute to poverty alleviation, and maintain environmental stability, while fulfilling Liberia's commitments under international agreements and conventions (World Bank, 2012).

The NFRL outlined "sustainable forest management" as an objective for promoting equitable development for all Liberians. This law established the "the 3Cs approach" to forest management with the intent of demarcating the forests for either conservation, commercial, or community uses. It also set forth recognition of users' rights to forests and outlined greater engagement of civil society and communities in the forest sector, particularly for governance of forest lands.

The CRL, outlines a process for communities to control and manage their forest resources, a marked difference to the laws concerning customary tenure. The CRL implies that the control of forest land is determined by the community's historic right to the land, which suggests that communities can claim rights to forests by establishing evidence of their traditional occupation or tenure. In this regard, the CRL advanced the tenure rights of communities over their forests and defined a process in which communities can be fully engaged in the sustainable management of forest lands (CRL 2009, Sec. 2.1).

The CRL regulation outlines a nine (9) step process that a community must follow for authorization, which culminates in the establishment, signing and approval of the Community Forest Management Agreement (CFMA) by the FDA. The agreement gives the FDA the power to grant community rights to forest resources on a specified area of land. The CRL provided an important basis for communities to have more rights over their forest resources and outlined a framework for participatory governance. The CRL, additionally, predicates that these governance bodies, primarily the CFMB, must be organized in order for a community to formalize its forest under the law (USAID, 2017) and stipulates that the community work together to establish a Community Forest Management Plan (CFMP) prior to engaging in any commercial activities (World Bank, 2012).

On a cursory observation, the passage of the CRL seems to be a laudable achievement as it lays out greater protection of community rights with respect to forests, but on closer inspection it does not explicitly recognize the customary rights of ownership. SDI (2017) states that "despite the gains that have been made in reforming the forest and land sector, the land tenure rights of rural communities will remain insecure if statutory provisions do not protect their ownership, access and use of land". Global Witness (2017) adds that the process by which the "CRL Regulation was revised serves as a positive example of consultative legal reform. However, the legal framework governing community forestry in Liberia remains underdeveloped on key issues that, if left unaddressed, risk undermining the ability of communities to manage their forests themselves. At present, there are insufficient safeguards to ensure that the people who own the forests make decisions about how to manage their resources". Criticisms

of the CRL have highlighted that the law vests too much power in the hands of the FDA to regulate use/activities in the community forests (USAID, 2011).

3.0 ASSESSMENT TRIP

Objectives and Findings

The goal of this assessment is to introduce, demonstrate and assess the need for MAST, and its participatory approach, for supporting USAID/Liberia's community forestry activities. It was conducted with a view of assessing how MAST could be used to introduce efficiencies in key forestry management processes and to delineate how resultant data can be used to develop a better understanding of community land and resources and support linking farmers and community forest enterprises with commodity and forest value chains.

The assessment explored general questions related to land and forest governance in view of the FIFES program and its objectives. Both FIFES and the Government of Liberia expressed interest in the potential application of MAST in strengthening forest governance and conservation in Liberia.

LTS initial findings support the feasibility of Mobile Applications to Secure Tenure (MAST) for community forest governance. MAST is especially applicable in the context of decentralized governance around forestry management in Liberia.

The use of this technology and its complimentary inclusive approach are practical and meaningful at a local level, since many challenges facing Community Forests are a result of their critical need for reliable land and forest resources information. As Dr. Samuel Koffa eloquently stated "What the Community does not have, is a clear picture of what they have" (Interview, 2018).

General Timeline

The assessment was envisaged to be conducted during two (2) in-country trips to Liberia. This assessment report is the result of the first trip which took place between January 29-February 10, 2018. It was coordinated with the USAID/Liberia Mission and its turn-key forest governance program, FIFES, to rapidly assess the feasibility for using MAST to improve community forest governance, and document its findings in an assessment report, to provide the USAID Mission with a high-level outline on how to adapt MAST into community forestry governance in Liberia.

The second phase of the assessment, tentatively scheduled for early May 2018, will focus on developing an implementation plan for adapting the MAST technology as part of the FIFES program to help it streamline project activities and achieve its objectives. The implementation approach will take into consideration options for MAST sustainability in Liberia. LTS will also provide FIFES with an initial customized version of MAST so that it can add-value to its program and document its enterprise farms in targeted Community Forests. It is envisioned that this process will also assist FIFES in engaging the communities in the management of forest resources.

Potential impacts and linkages within USAID/Liberia's portfolio

In the sections below, LTS has provided an outline for a carefully tailored MAST approach to support community forestry management in Liberia. The approach is incremental, but comprehensive and focuses on capturing forestry information as well as individual or communal rights of land and resources. This will initially help FIFES to document farmers and beneficiaries of community forest enterprises (phase 1), then document and understand community land holdings in view of competing rights (phase 2) and finally capture key forest information that is useful for management and monitoring purposes (phase 3). This

approach seeks to add value immediately to help FIFES work with qualified community forest enterprises, helps beneficiaries understand their land holdings and potential production yields, and establish commodity and forest value chains in local, national and/or international markets, which will work to promote a path to self-reliance and resilience across in all community forests where FIFES is working.

Expected Results of LTS Assessment Trip

- Training and demonstrations in the MAST technology and approach for FIFES and its beneficiaries;
- Provision of an assessment report (this report), which provides a high-level outline on how to adapt MAST into community forestry governance in Liberia;
- Provision of an initial version of the MAST software, along with training, to support documentation of FIFES enterprise farms (Phase I) as outlined below; and
- An implementation plan that will outline activities and processes for LTS' comprehensive approach integration of MAST into the FIFES program. The implementation plan will outline sustainability options.

3.1 METHODOLOGY

During the initial Assessment Trip, LTS held several meetings with USAID/Liberia staff, USAID/FIFES and officials of the Government of Liberia, primarily the FDA, in Monrovia. Field visits to Community Forests were facilitated by FIFES staff in Nimba and Grand Bassa Counties, respectively.

Interviews with stakeholders including USAID, government officials, development practitioners, and forest stakeholders provided information on the critical issues in the forestry sector. Field meetings with Community Forest Management Board members, which included women and young members of the forest communities, focused on gathering information about community forests and understanding challenges communities face regarding the management and monitoring of their lands and forests. LTS also provided demonstrations of MAST technology. The assessment, in addition to literature on forestry governance and land rights in Liberia, provided LTS with a picture of the present challenges facing Liberia's forestry sector, in view of adapting MAST to improve governance processes and conservation practices. A complete list of the meetings and interviews held can be found in Annex A.

3.2 FINDINGS

The assessment confirms that there is enormous potential to utilize MAST to help communities create an enabling environment to allow them to better negotiate their rights and ensure that their resources are used in a manner that is sustainable and economically beneficial to all. The findings are organized along 5 key themes:

1. Community Forest Governance
2. Land Use and Land Tenure
3. Information Management
4. Linking Communities to Economic Opportunities
5. Forest Management and Monitoring

3.2.1 COMMUNITY FOREST GOVERNANCE

IGI global, a leading academic publisher, defines land governance as a procedure, policies, processes and institutions by which land, property and other natural resources are managed (www.igi-global.com). The governance institutions reviewed during this assessment have all received technical assistance from donor

funded projects, namely USAID's Land Rights and Community Forestry Program (LRCPF) and People, Rules, and Organizations Supporting the Protection of Ecosystem Resources (PROSPER). Women were found to be represented on governance boards, our cursory assessment was unable to determine whether women effectively participated in management decisions. Participants indicated that they felt local forest governance arrangements were important, worked well and provided conduits for community members to express their concerns about land and forest resources. While interviews were conducted in only four Community Forests, interviews uncovered misperceptions related to land governance and rights. CFMB members participating in community meetings for the initial MAST assessment overwhelmingly perceived their rights to the forest to be secure, in contradiction to statutory law, and the CRL, which recognizes their rights to the use and management of the forest.

The technical and organizational capacity of CFMBs – which must be established prior to the start of any commercial activities on community forest lands – is limited. CFMBs lack basic legal literacy, technical expertise, equipment, funding and most importantly, business and negotiation skills. With low levels of capacity, success of these institutions to effectively manage forest and define how they can or will receive benefits from their forests cannot be assured. For example, the Gba CFMB did not have reliable information regarding the value of the forest resources in question during a recent negotiation with ArcelorMittal over the use of 450 acres of community forest land for mining.

While it is important to note that community leaders thought local forest governance structures worked well, it is also telling that there are misunderstandings regarding community rights to land and resources. Interviewees misunderstood their rights that have come with the Community Forest authorization. This points to a need for communities not only to increase their understanding of their lands and resource holdings, but also their rights.

3.2.2 LAND USE AND LAND TENURE

Land use and land tenure represent big challenges for rural communities in Liberia. In many of the communities visited, land is viewed as the most important asset. It is held collectively in family groupings and is governed by a set of internal rules. Interviewees expressed satisfaction with type of land tenure system, indicating that they understood the limits or boundaries of their lands and thought traditional tenure arrangements to be fair and equitable. While women participants were not that vocal in community meetings, women participants indicated that they abided by the same rules as men and they thought that the rules for accessing land were equitable¹. Despite claims by community members that they understood their customary land boundaries, participants did not possess any documentation regarding the demarcation of boundaries of traditional family holdings. Nor did any community possess a map and/or statutory land deeds or tribal certificates².

Land disputes were identified as not being prevalent. However, interviewees in Blei and Gba Community Forests indicated that there were a growing number of land disputes caused by ArcelorMittal, which has ownership rights to lands traditionally held by families. The expansion of mining operations displaced persons and prompted them to move onto lands held by other families. Tensions arose, people explained, because individuals moved onto land without following customary practices of consulting with and/or paying compensatory fees to family leaders. In most cases, such disputes have been resolved through customary mechanisms, but in some cases, they have been elevated to the county level. These

¹ In Liberia, marriage system is predominantly patrilocal, whereby women relocate to the husbands' community upon marriage and therefore access land for housing and farming there. Prior to marriage, daughters, like sons, typically farm with their parents although there are some variations (USAID, 2011).

² One community participant in Grand Bassa indicated that she was aware of somebody in her village having a title deed to land, but this claim was not verified as part of this assessment.

conflicts bring to light tenure insecurity, especially in view of those concessions that have been afforded use and ownership rights to lands held under customary tenure.

Additionally, the assessment team found that there are growing perceptions that land is being depleted in communities. Some participants cited population growth, while others indicated pressures are due to shifting agriculture or slash-and-burn agriculture. Our assessment did not assess the viability of this agricultural system or perform an analysis of the amount of land, length of fallow periods or availability of labor need to make such a system viable, but instead relied on qualitative input received from community members. Interviewees, especially in the upland forest communities, expressed fears that shifting agriculture may not be sustainable. One participant explained that while agriculture is not allowed in the forest, intensive traditional farming practices and chain-sawing [in the wider landscape] are causing people to move farther away from settlement areas to find suitable land to farm. This, an elder from Zor community explained, may lead people to eventually encroach on the Community Forest, which is protected.

While there is no evidence to indicate that traditional agriculture practices are impacting land, there is clearly an awareness of the importance of land and a lack of information to quantify impacts at the community level.

3.2.3 INFORMATION MANAGEMENT

Based on meetings conducted in four communities, LTS finds a need for communities to increase their spatial understanding of their land and forest resources. This includes land in the wider landscape, held under traditional or customary tenure systems, as well as the Community Forest itself. Land information has been proven to be beneficial for supporting better decision-making regarding land uses. In the community forests that we visited, there is an inability to quantify resources and estimate their value. This is a major challenge not just when planning for sustainable use of resources but also for income generation (i.e. linking farms and community enterprises to value chains). Predecessor donor programs such as LRCFP and PROSPER, for instance, have documented examples where maps have helped demarcate forest boundaries and community resources and overcome misperceptions related to the control of land and resources. With the exception of one community, community maps or GIS maps were not visible indicating that not much has been done in the way of mapping and using spatial information at the community level. Helping communities to develop a clear understanding of community lands (location, extent or boundaries) and resources can bring about significant benefits, including increasing tenure security, increase economic opportunities for individuals and help reduce costs for resource management and administration.

In this regard, maps can be powerful tools to engage stakeholders and help communities understand their holdings, reach agreements regarding use of the land, as well as understand the constraints related to their land. Such information can also be used to identify opportunities to better utilize resources or obtain economic benefit, negotiate with potential investors, propose activities to potential donors, etc. By not having access to information about land held traditionally in communities and their Community Forests, such as boundaries and/or activities occurring on it, CFMBs are restricted in making decisions regarding current and future land uses, whether it be focused on settlement needs, agriculture, timber or for the extraction of Non-Timber Forest Products (NTFP). For example, in Zor, the community has allowed small-scale chain-sawing to occur without understanding the amount of land deforested and/or the value of the resources that are being extracted. The availability of community maps and quantification of existing resources would enable communities understand the impact of such activities on their resources and make better decisions.

3.2.4 USING INFORMATION TO LINK COMMUNITIES TO ECONOMIC OPPORTUNITIES

Local-level forest governance structures can play a key role in helping communities achieve development and growth. This assessment revealed, however, that all communities visited were struggling to define a strategy on how best to use their land/forest, for economic purposes. The focus of many of the CFMBs visited seemed to be geared toward protection and conservation rather than economic development, though community members need and desire economic development strategies.

Limited economic development strategies are related to the capacity of the CFMBs, and the fact that many of them have not received any technical assistance outside of the donor programs that established them. Technical assistance is required to build stronger decision-making mechanisms at the community level to define meaningful economic development strategies. Systematic efforts, like the Enterprise Farm program being promoted by FIFES, have the potential for promoting equitable economic benefits by linking individual farms to wider economic development through the CFMBs. As cited above there is a need to understand the value of land, especially the value of incomes that can be derived from lands. Such information will be important for providing support to CFMBs and for linking them with markets and helping them with skills and knowledge on how to overcome challenges related to matching supply with demands.

Land information, specifically information about the enterprise farms, and the quantity, quality and value of products being farmed/harvested will be important for FIFES to build this capacity within the CFMBs so that they may prosper in the future without development assistance.

3.2.5 FOREST MANAGEMENT AND MONITORING

As highlighted above, CFMPs require reorientation away from a sole focus on resource protection to one that is also focused on sustainable livelihoods. Regulations can be used to realign the CFMP to ensure that the management of the forest is in-sync with other community activities, whether it be agriculture, agroforestry, commercial timber or the harvesting of Non-Timber Forest Products (NTFP). By-laws also can be used to update operations and management procedures, define new management objectives, outline responsibilities and identify and/or outline mechanisms for benefit sharing.

Incorporating forest management and income generation features into CFMPs may also work to protect communities, especially when control of their resources is uncertain, as is the case in Liberia. It is important that the CFMPs define rules by which the CFMB can interact with outsiders regarding the use of their land and resources. While having better land information can help communities negotiate these benefits, having protocols in place can help protect communities from making hasty decisions. As such, by-laws can be used to protect communities by adopting mechanisms that require obtaining technical advice or consulting with the wider community.

There is also a need to consider monitoring as part of the CFMP. Stakeholders identified that their participatory monitoring efforts are constrained. Challenges identified included the need for rudimentary equipment such as a motorbike, fuel stipends, boots and raincoats, but also included assistance with negotiating transboundary infractions from neighboring countries. Forest monitoring is occurring, but without any clear linkage to assessing the properties of forests with respect to reference data (biodiversity and economic) or even for tracking social, economic, environmental infractions.

CFMBs have a need for defining better management schemes/plans as well as establishing regimens for monitoring their forest, however, they require better information to do so. Some approaches that may be considered to improve management may be to link communities to international forest management platforms and/or using specific tools such as Global Forest Watch's Forest Watcher application.

4.0 PROPOSED APPROACH

4.1 RATIONALE FOR MAST IN COMMUNITY FORESTRY

The goal of establishing community forests in Liberia was to empower communities in the sustainable management of their forests and resources. Sustainable forest management, however, assumes that there are fully functioning community forest governance structures. While the CRL has been instrumental in establishing these structures, the governance mechanisms remain weak, as highlighted in the preceding section. Communities possess limited capacity, coupled with a poor understanding of the boundaries of their lands and forests. This has weakened their ability to make sustainable decisions and/or to derive meaningful benefits from their lands and forests. The lack of consolidated land information means that there is a limited understanding by community members about the quantity, status, or value of their lands and forests. This situation is made worse by insufficient safeguards and loopholes in the CRL that limit community rights to defining the use of their own resources. (Global Witness, 2017). Such safeguards are made even more insecure by the fact that logging and mineral companies may possess rights to the same lands that are to be safeguarded by the community.

The rationale for utilizing MAST is that it provides a participatory approach and sustainable technology for capturing land and resource information quickly and at a low cost, with community engagement. In turn, improved and comprehensive land information can empower communities by increasing their knowledge of land and resources.

Building reliable land information at the community level is consistent with FIFES theory of change, which is focused on improving biodiversity of forests by increasing capacity of forest-based enterprises to provide sustainable economic opportunities for farmers and forest-dependent communities as a way of combating deforestation and loss of biodiversity.

In Liberia, this is important for both the Community Forests and wider land governance. Understanding land holdings is paramount for helping communities understand the quantity and values of resources they possess and to help them develop capacity so that they may begin to derive benefits from their lands in an economically beneficial and sustainable manner. Comprehensive land information can also be used to help communities develop meaningful land use regulations and set in place mechanisms and guidelines that help protect their forest resources. The development of a reliable inventory of lands and resources can also facilitate a clear understanding of the community's resources in view of establishing value chains. This must be, however, coupled with technical assistance and advocacy at the community level to ensure that the capacity of the CFMB has been built and will be sustained.

Participatory engagement during the process of inventorying land resources with MAST will support the development of reliable land information for decision making and help to build an important knowledge base about land and resources within target forest communities. This is particularly important in Liberia where initial land information is minimal or missing altogether.

By engaging citizens in the process of collecting land information, MAST has the potential to promote transparency in forest governance in Liberia, promote better and more sustainable uses of land and resources, and help increase economic benefits to the communities.

4.2 KEY STAKEHOLDERS AND ACTORS

Key stakeholders and actors whose involvement would be critical to the implementation of MAST in Liberia are:

- FIFES –The three objectives of FIFES are to: strengthen selected forest and agricultural value chains; establish legal and management frameworks for forest enterprises; and enhance knowledge and skills for forest enterprises and landscape management. The primary focus of these activities is in eleven (11) Community Forests in Nimba and Grand Bassa counties. FIFES is currently working to establish a group of agriculture and agroforest entrepreneurs. FIFES is also seeking to increase the financial benefits to both entrepreneurs and the citizens of the Community Forests by helping to establish forest and agricultural value chains through CFMBs. In the implementation of MAST, FIFES technical assistance would focus on building stronger governance institutions, such as the CFMBs, to put in place more transparent, accountable and inclusive management plans for Community Forests.
- Forest Development Authority (FDA) – The FDA is working closely with FIFES to support the aforementioned Community Forests. FDA is primarily supporting FIFES through extension service staff that have been assigned to Nimba and Grand Bassa. These extension agents are supportive of the FIFES program and are assisting the communities with advice on forest management and best practices. FIFES is also working in the FDA’s main office in Monrovia and have seconded staff from FDA to help advise it on the implementation of community-based programming. FIFES will be working closely with the FDA on determining the biodiversity and economic value of the selected 11 Community Forests. Initially, the FDA’s role in regard to the implementation of MAST, will support FIFES efforts, but eventually will take more of a leadership role in the management of the technology, and in its implementation, in other locations.
- Land Authority (LA) - The importance of the Liberian Land Authority cannot be underestimated in the proposed process, as its mandate is to support land governance. The documentation of traditional family holdings in the wider community with MAST will help support better landscape planning in the Forest Communities, but also provides an opportunity to support the Land Authority’s activities related to documenting customary land rights. It also provides opportunities to facilitate linkages and learning with other donor projects, namely USAID’s Land Governance Support Activity (LGSA) and the World Bank’s Liberia Land Administration Project (LLAP) which are seeking to identify technologies and approaches to document customary holdings.
- USAID’s Land Technology Solutions (LTS) project, which is focused on improving land and resource governance through the implementation of MAST worldwide, can also be considered a partner and/or stakeholder. In MAST implementation, LTS would provide targeted technical support to FIFES starting in the assessment phase, and direct technical support throughout all proposed phases (outlined below), including supporting the customization of MAST software, providing technical assistance and training to FIFES for establishing MAST, and ensuring that results are reported in a comprehensive manner.

4.3 CONCEPTUAL APPROACH

Given the good fit of MAST technology and approach to the needs of communities regarding the management of Community Forests, LTS proposes to integrate MAST into FIFES’ operations to add value to its program. The LTS conceptual approach outlines a gradual process of building a comprehensive land information database for the update of the Community Forest Management Plan (CFMP) by following a series of phased steps.

It is anticipated that all phases of the pilot will be implemented in **Zor Community Forest** initially and following the completion of the pilot and lessons learned, MAST for CF will be scaled to other targeted communities.

Each Phase is designed to add value by integrating reliable land information to support CF management and FIFES activities, and to build the capacity of target CFMBs and FDA staff in the development of a forest management and monitoring program.

“[Without]...adequate and reliable data, planning of land use and management of natural resources will continue to be guesswork and the use of land and management of natural resources haphazard and wasteful, and the development process unsustainable” Prof. H. van Lier (2002).

LTS has proposed a phased and comprehensive approach, as budget and logistical constraints allow, to maximize impact and create a demonstrable project to improve community forest governance in Liberia.

- **Phase I (February-May 2018): Inventory Enterprise Farms to Support Value Chains.**

Compile base mapping information³ and provide a basic MAST mobile application and platform (data management interface) to help facilitate the appraisal of income generation pathways and assist in the initial phases of environmental planning. The compilation of land information from national and global sources will help the CFMBs identify and understand initial land use and environmental constraints as a preliminary step in the update of the Community Forest Management Plan (CFMP), while the documentation of enterprise farms will help FIFES and the CFMB establish and strengthen commodity and forest value chains for sustained economic growth. Specific requirements for ongoing data collection and sustainable data management will be identified during this phase.

Phase I Deliverables: CF MAST web platform, enterprise mobile application and guide, printed maps, toolkit, implementation plan, that addresses sustainability.

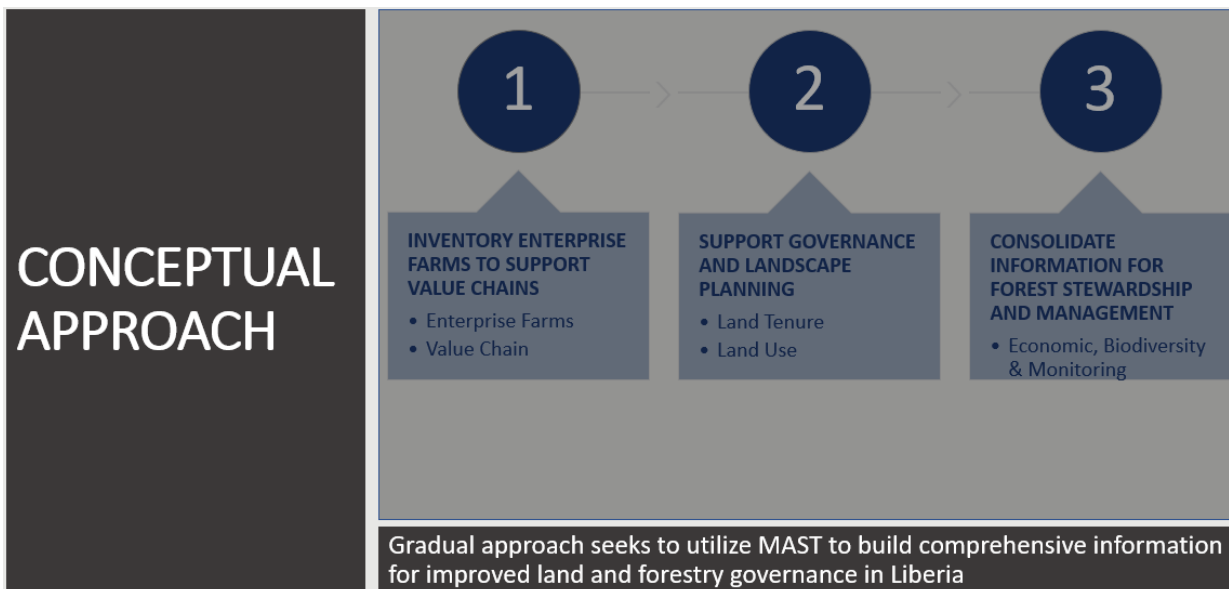
- **Phase 2 (Tentatively May-September 2018): Support Governance and Landscape Planning.** Use a customized version of MAST in a participatory manner to document traditional family land holdings and to consolidate land use/ land cover mapping information for the entire community. Together these data will provide the CFMB a basis for a thorough landscape assessment of its community lands and forest resources. This information will be consolidated into MAST to allow communities together with FIFES, the CFMB and FDA to begin identifying and defining programmatic areas for the development of the CFMP regarding both the use of lands in the wider landscape and its community forest.

Phase II Deliverables: Updated CF MAST platform with delineated family land holdings and community resources inventories as identified during participatory mapping. Updated MAST mobile application for family land/resources mapping and guide. Participatory maps, greater landscape spatial analysis for CFMP, toolkit, a memorandum report and recommendations for the update of the CFMP.

³ Base mapping information that will be collected and loading to MAST will include but not be limited to Community Forest boundaries, resources mapping data as available from PROSPER and previous activities, agriculture and mining concessions, FDA permit uses, protected areas, and national land cover maps.

- Phase 3 (Tentatively September-November 2018): Consolidate Information for Forest Stewardship and Management.** Integrate spatial information about the biodiversity and economic values of the Community Forest into MAST. This information will be integrated into MAST for visualization and management purposes to provide the CFMBs with a simple-to-use information platform from which to comprehensively appraise and develop spatial and management frameworks for its CFMP, with a focus on protecting and actively managing its land and forest resources for sustained economic growth. To address on-going monitoring needs, LTS will work with FIFES and the FDA to identify appropriate and scalable options for forest monitoring, which will include, but not be limited to linking MAST to third-party software applications and/or data management platforms. MAST will be customized, and forest guards trained to meet identified forest monitoring requirements (i.e. documentation of incursions, incidents, etc.).

Phase III Deliverables: Updated CF MAST platform with biodiversity and economic data and inventories, integrated reporting functions and with linkages to third party applications for forest monitoring.



As part of the current assessment, and specifically during the second trip scheduled for early May 2018, LTS will deliver a preliminary version of MAST, along with five (5) smartphones. LTS will work with local FIFES staff in Zor for participatory mapping, to test the delivered application/platform and to provide training to FIFES, CFMB and FDA staff in the use of MAST. Training and orientation will take place in Zor Community Forest as a precursor of the phases outlined below.

To build community capacity in local resources governance and complement FIFES objective of assessing key forest value chains and strengthening the organizational capacity of CFMBs, LTS will support the Baseline resource mapping and **Inventory of Enterprise Farms to Support Value Chains (Phase I)** in a Zor Community Forest. This will be done by integrating land information collected from national sources into MAST and providing FIFES with a customized version of MAST to inventory and document enterprise farms. LTS will provide technical support to FIFES, CFMBs and FDA in combining maps and performing spatial queries to help the community develop an initial understanding of its land use and environmental constraints. The use of information and visualization tools in MAST will help communities identify competing uses and needs as well as opportunities for the update of the CFMP. LTS will also provide training in MAST in capturing the boundaries of enterprise farms and collecting information and

reporting on agriculture and agroforestry production. Such information can be used to engage the CFMB and to establish and strengthen community and forestry value chains for guaranteeing both the growth in agricultural output and the conservation of natural resources.

Result 1: Initial landscape analysis assessing competing use and needs for community lands and resources and an inventory of enterprise farms for establishing economic value chains and pathways for economic growth, planning and conservation.

Phase 2 would seek to improve **Support Governance and Landscape Planning** by helping FIFES, the CFMB and FDA develop key information required for a comprehensive CFMP. This phase would provide a mechanism to efficiently capture, compile and manage information about family land holdings and land uses in the wider landscape. LTS would work to customize MAST for use in documenting family land holdings. This will be done in accordance with the Land Authority's Community Self-Identification Guide (Land Authority, 2017). The documentation of family lands will result in a general community boundary for the Community Forest, which can be used as a spatial boundary for which to assess and integrate land use/land cover information for the community and consult communities in a participatory process using printed maps and the MAST application. This would help FIFES, the CFMB and FDA evaluate the community's land holdings, assess present and future needs, and evaluate the availability of land to meet them. By engaging the community in this systematic assessment, the community can assess which alternatives for land use, economic and social conditions are preferable and put into place in their CFMP guidelines and regulations that are focused meeting the needs of the community while safeguarding resources for the future.

Result 2: Reliable and timely information of community land use and holdings in MAST will provide FIFES, the CFMB and FDA tools to engage citizens in the definition of general land use and economic development strategies.

Phase 3, Consolidate Information for Forest Stewardship and Management, would focus on helping FIFES consolidate other pertinent information concerning the biodiversity and economic value of Community Forests and build capacity of the CFMB to develop a comprehensive CFMP. LTS will work with FIFES to customize MAST to ensure that the biodiversity and economic spatial data are incorporated into the platform and there are adequate visualization and reporting tools to facilitate enhanced decision making at the community level as part of the update of the CFMP. It is anticipated that the data consolidated in MAST will allow FIFES, the CFMB and FDA to develop a comprehensive approach for more effective use of the Community Forest and promote activities that can generate income for the community, while putting in place programmatic strategies for conserving this resource for future generations. As part of the CFMP, active monitoring of Community Forest should be considered. In this regard, LTS would work with FIFES to define requirements for linking the CFMB with appropriate international monitoring and/or technical assistance support groups and customize MAST to work with other mobile applications that are specifically designed for forest monitoring (i.e. Forest Watcher).

Result 3: Integrated and consolidated data in MAST will facilitate FIFES, the CFMB and FDA to work together to finalize the CFMP and ensure that land use planning and management regulations, are comprehensive, economically beneficial and environmentally sustainable.

Throughout this process, LTS would work with FIFES to capture lessons learned and data for LTS monitoring and evaluation, with a focus on replicating the MAST approach for community forest governance throughout Liberia. At a minimum, LTS would work with FIFES to establish a set of monitoring, evaluation and learning (ME&L) reporting mechanisms, in view of a set group of indicators that have been established for MAST implementation worldwide. Such evaluation contemplates establishing a baseline and collecting data during implementation on processes and perceptions. In this regard, LTS envisions working closely with FIFES to ensure accountability of results, but also to ensure

impacts beyond the project. This would include reporting on lessons learned and defining a set of recommendations to improve the future performance of USAID land tenure projects in Liberia.

The project would be implemented with due consideration of likely impacts on the environment, including institutional, policy and operational aspects. It is our assessment, however, that the activities would take place under the FIFES project and fall **within** the categorical exclusions of the LTS Initial Environmental Examination and **thus should not require further environmental assessment**. LTS seeks confirmation from USAID on this determination in its review of this assessment report.

4.4 RISKS AND ASSUMPTIONS

One key risk associated with the implementation of the comprehensive approach outlined above is that there could be insufficient resources available to support the comprehensive integration of MAST technologies into the FIFES program.

There are also several assumptions associated with the implementation of the MAST as part of the FIFES program:

- LTS would support activities related to field work and training associated with the second phase of assessment, including procurement of equipment and hosting of application.
- For the execution of Phase 2, LTS and FIFES will work closely with the FDA and LA in Monrovia to devise a community sensitization program that can be used to orient community members about the mapping process and ensure a clear understanding of their rights to land and forest resources. This would also ensure there are mechanisms in place for protecting the rights of vulnerable groups (women, youth, etc.) to community lands and forest resources.
- FIFES is able to provide logistical support, such as the provision of vehicles, to ensure that MAST is tested appropriately in the field and that FIFES, FDA and a selected CFMB are trained in MAST by LTS.
- LTS would provide a combination of on-site and off-site support to FIFES in its initial use and operation of MAST for enterprise farm mapping.
- FIFES would ensure the existence of a technological infrastructure that can support the operation of MAST in the field and in the office (i.e. Internet and/or mobile data plans, etc.).

5.0 CONCLUSION AND NEXT STEPS

This initial assessment was intended to introduce, demonstrate and assess the needs for MAST and its participatory approach for improving forest governance in Liberia, and specifically identify ways to support FIFES in meeting its objectives of strengthening selected forest and agricultural value chains; establishing legal and management frameworks for forest enterprises; and enhancing knowledge and skills for forest enterprises and landscape management.

In this initial assessment, we sought, by means of interviews and a review of the published research and project documents, to describe problems and challenges associated with forest governance in Liberia, and present strategies for improving forest governance with MAST. Our findings indicate that MAST is feasible/sustainable technology and approach and that there is a need for consolidating land information with the intent of developing value chains, better understanding of land holdings and resources, and providing communities with a comprehensive set of information to develop community management plans.

By engaging citizens in the process of collecting land information, MAST has the potential to promote transparency in forest governance in Liberia, promote better and more sustainable uses of land and resources, and help increase economic benefits to the communities.

The purpose of MAST is to provide community members with a simple tool to collect and visualize information about land and resources, and at the same time promote, a better understanding of their land holdings and resources by engaging community members directly in the process of collecting data. In the Liberian context, and in specific reference to supporting FIFES, MAST is envisaged to support:

- Value Chains – By inventorying farms, MAST will provide a baseline understanding of the enterprise farms to give FIFES, and each CFMB, the ability to estimate the type, quantity and value of products that are either being farmed or harvested within their respective communities. It will also help FIFES link communities to markets as well as help determine where and what more detailed or site-specific technical assistance may be needed to meet production goals.
- Landscape Planning – MAST was specifically designed to engage citizens in documenting their land and rights. It can be used in Liberia to document family land holdings, which in conjunction with other spatial data and information, can help land use decision-making and to prioritize activities in communities.
- Forest Stewardship and Management– The information currently collected is not systematic and insufficient for forest management and monitoring. MAST offers a set of useful, sustainable tools to consolidate and visualize information to support the development of meaningful CFMPs, and to support ongoing forest management needs. MAST can be modified to house technical and scientific data and be linked to 3rd party platforms that are specifically designed to document and report on ongoing activities/ infractions, forest alerts and other important information as determined by CFMBs and FDA.

In short, a better understanding of the landscape, the forest, and its health can be promoted using the information that is collected and consolidated with MAST technology and approach.

Although MAST was originally designed to capture land and resource rights at the parcel level, it can be used/adapted on its own and in combination with other tools for community forest management purposes. The next phase of the assessment, scheduled for early May 2018, will deliver the following:

Deliverable	Result/Outcome	Date
MAST (Initial Version)	Customized Version of MAST to be used in immediately or in Phase 1, which will include: <ul style="list-style-type: none"> • Base Mapping Information (concessions, national protected areas; • Customized Mobile Application for Enterprise Farms; and • Customized Data Management infrastructure that allows visualization and reporting of enterprise farm data. 	May 2018
MAST Training	In-field training to FIFES, CFMB and FDA staff persons on use of MAST for documenting enterprise farms.	May 2018
Implementation Plan	Implementation Plan and Budget for executing Phase 1, Phase 2 and Phase 3.	June 2018
MAST (Phase 2)	Customized Version of MAST to support landscape planning (i.e. mapping of community lands and land use mapping (Phase 2).	+ 2 Months
MAST (Phase 3)	Customized Version of MAST for Forest Stewardship and Management (i.e. incorporate biodiversity and economic value spatial data).	+ 2 Months

As highlighted in the matrix above, the initial version of MAST that consolidates existing information and is designed to facilitate the collection of data on FIFES enterprise farms. This initial version will be provided as part of the assessment phase and will focus on immediately supporting FIFES in the documentation of its enterprise farms (Phase 1). Formal testing and training will also be part of the second assessment trip and will focus on enhancing MAST and understanding how to integrate activities as part of implementation plan for all phases. The implementation plan will outline specific activities and take into account sustainability of the technology in Liberia. The implementation plan will be presented in conjunction with a budget and timeline for execution.

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ANNEX

ANNEX A: PRESENTATION, MEETINGS AND INTERVIEWS

The objective of a series of meetings with national-level and local level stakeholders was varied and is summarized in the matrix below.

AGENCY OR ORGANIZATION	DESCRIPTION OR MEETING	DATE
USAID	Presentation to USAID Mission <ul style="list-style-type: none"> Participated in presentation forum concerning USAID land projects Provided Presentation to USAID Mission and National Government Stakeholders 	1-29-2018
FIFES	Meeting with FIFES Monrovia Staff – Glenn Lines, Francis Rogers, Stewart Sherman. <ul style="list-style-type: none"> Met with FIFES staff to discuss assessment mission, goals and objectives Provided FIFES with overview of LTS and MAST Discussed FIFES program priorities 	1-29-2018
FDA	Meeting Technical Officer of FDA – James Kapendya <ul style="list-style-type: none"> Provided an overview of LTS and MAST Discussed objectives of assessment, and was ushered to speak with technical leads for conservation, community and inventory 	1-30-2018
FDA	Meeting with Mr. Blamah Goll, Technical Director, Conservation Department <ul style="list-style-type: none"> Provided an overview of LTS and MAST Discuss biodiversity requirements for inventorying forests Department is focused on inventorying biodiversity for protected areas Department works closely with international organizations such as Conservation International, World Chimpanzee Fund, etc. 	1-30-2018
FDA	Mrs. Gertrude Nyaley, Technical Director Community Development <ul style="list-style-type: none"> Provided an overview of LTS and MAST Discussed community forest registration process Identified critical areas where MAST technology and approach could be applied to streamline process 	1-30-2018
---	Travel from Monrovia to Nimba, County	1-31-2018
FIFES	FIFES staff in Nimba (Mr. Gonkarnue B. Tiatur, Laveto Akoi-Forkpa) <ul style="list-style-type: none"> Provided an overview of LTS and MAST Discussed logistics for field trips 	1-31-2018
Blei CFMB	Community Forest Meeting/Presentation <ul style="list-style-type: none"> Provided an overview of LTS and MAST Conducted workshop interview and questioning Visited FIFES enterprise demonstration plot Provided in-field demonstration of MAST 	2-1-2018
Gba CFMB	Community Forest Meeting/Presentation <ul style="list-style-type: none"> Provided an overview of LTS and MAST Conducted workshop interview and questioning 	2-2-2018

AGENCY OR ORGANIZATION	DESCRIPTION OR MEETING	DATE
	<ul style="list-style-type: none"> • Visited FIFES enterprise demonstration plot • Provided in-field demonstration of MAST • Visited Community Forest 	
Zor CFMB	Community Forest Meeting/Presentation <ul style="list-style-type: none"> • Provided an overview of LTS and MAST • Conducted workshop interview and questioning • Visited FIFES enterprise demonstration plot • Provided in-field demonstration of MAST • Visited CFMB office • Visited Community Forest 	2-3-2018
---	Travel from Nimba, County to Grand Bassa, County	2-4-2018
Bacconie	Community Forest Meeting/Presentation <ul style="list-style-type: none"> • Provided an overview of LTS and MAST • Conducted workshop interview and questioning • Visited FIFES enterprise demonstration plot • Provided in-field demonstration of MAST • Visited Community Forest 	2-5-2018
FIFES	FIFES – Mr. Glenn Lines <ul style="list-style-type: none"> • Provided FIFES with overview of field trip • Provided FIFES with initial thoughts related to supporting FIFES project with MAST • FIFES suggested that LTS get in touch with World Bank 	2-6-2018
LISGIS	LISGIS – Mr. Thomas Davis, Mr. Joseph Nyan <ul style="list-style-type: none"> • Provided an overview of LTS and MAST • Discussed preliminary data requirements • Reviewed geospatial data, including land use and land cover maps, that were either developed and/or being completed • Discussed some of LTS' initial data needs and the protocol for gathering data from LISGIS 	
CFWG	Community Forest Working Group Workshop <ul style="list-style-type: none"> • Provided Presentation to National Government Stakeholders • Provided Demonstration of MAST technology including MAST Mobile and MAST DMI • Engaged Stakeholders in Strategic Planning exercise (breakout groups) • Summarized findings with CFWG 	2-7-2018
USAID	USAID Mission – Mrs. Lisa Korte, Mr. Yoel Krishner <ul style="list-style-type: none"> • Provided draft presentation • Discussed key items falling out from stakeholder meetings, field visits and the CFWG workshop 	2-8-2018
Individual Consultant	Mr. Sam Koffa <ul style="list-style-type: none"> • Discussed issues and challenges related to community forest management 	2-8-2018
USAID	USAID Mission Out brief <ul style="list-style-type: none"> • Provided presentation to senior Mission staff persons • Answered questions stemming from presentation • Identified key follow-up items 	2-9-2018

AGENCY OR ORGANIZATION	DESCRIPTION OR MEETING	DATE
World Bank	World Bank – Mr. Peter Aldinger <ul style="list-style-type: none"> • Provided an overview of LTS and MAST • Highlighted that there may be synergies between what LTS is proposing with FIFES, and work that is contemplated by World Bank in forestry sector. • World Bank expressed a keen interest in MAST, and understanding better how it can be utilized in the future work with the FDA, and with the Land Authority 	2-9-2018
FIFES	FIFES – Mr. Glenn Lines <ul style="list-style-type: none"> • Provided an out-brief, which was a synopsis of the presentation given to USAID • Highlighted our conceptual approach 	2-9-2018